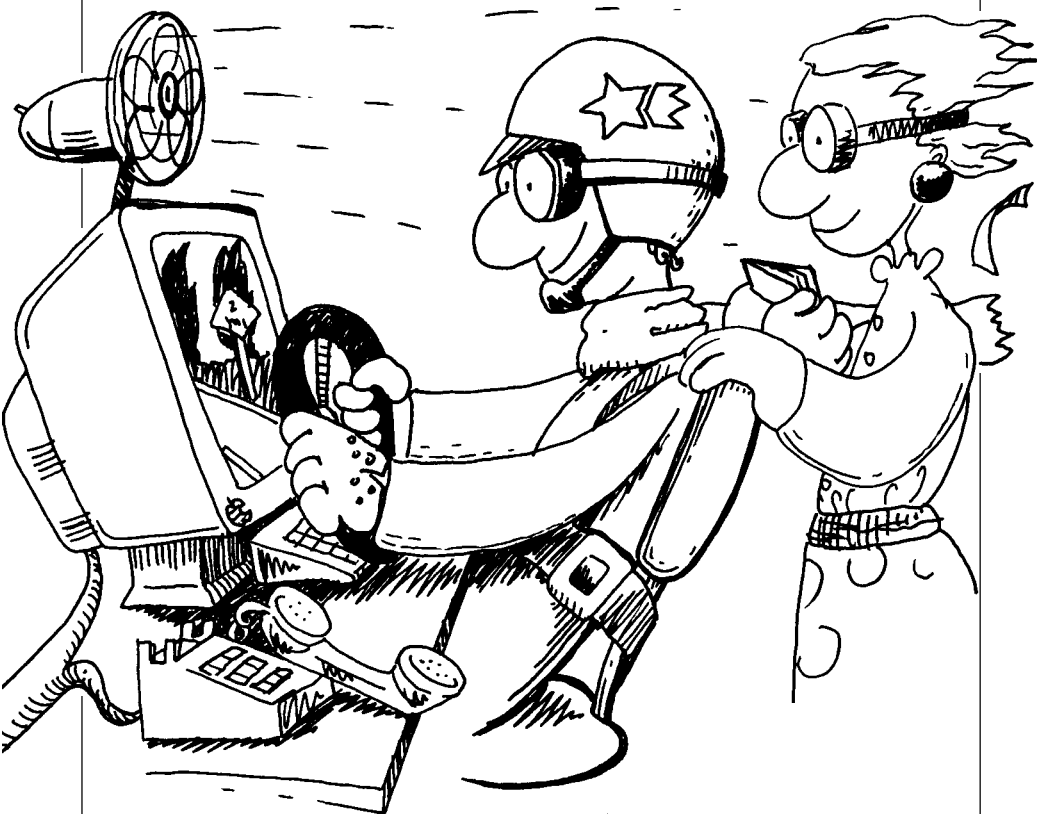


TELECONFERENCING

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Guide to
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Teleconferencing
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Options for
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Virginia Government
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The Virginia Information Technologies Agency
Telemedia Division

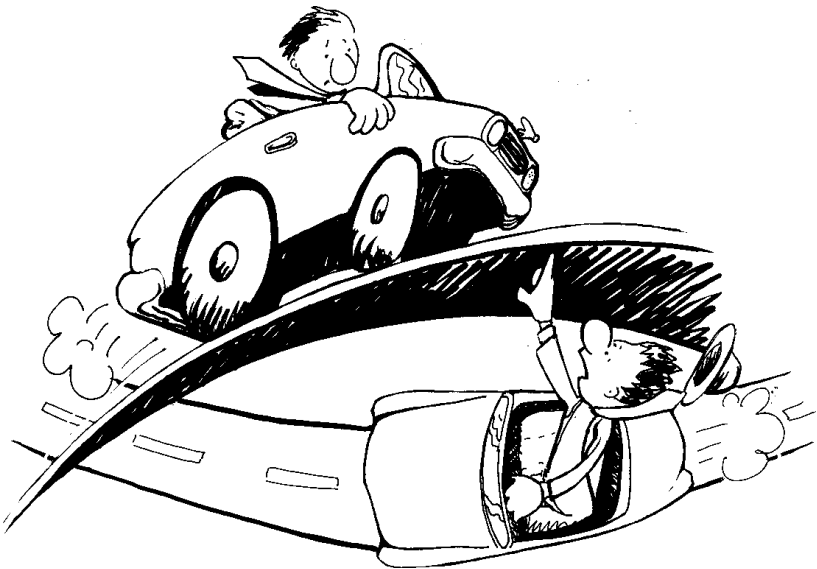
TELECONFERENCING

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Moving

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Ideas and Information

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Instead of People

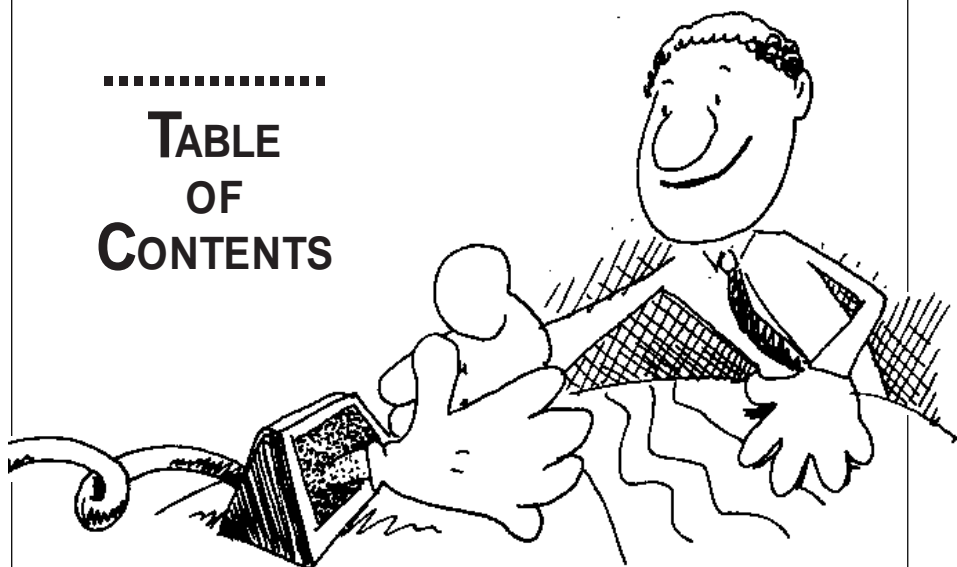
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*Guide to
Teleconferencing
Options for
Virginia
Government*

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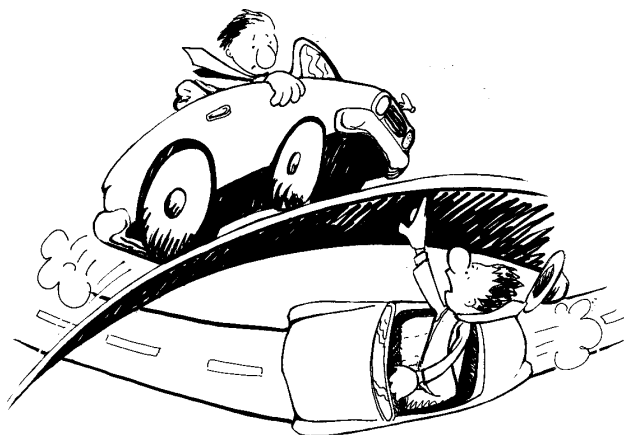
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INTRODUCTION TO TELECONFERENCING



..... *Travel the* *21st century way*

The exchange of ideas and information is a vital part of the business day. This exchange, however, can be awkward and expensive when time and distance separate the people trying to communicate.

“Traveling” via teleconferencing is a solution to the problem. It is one of the best means available for dealing with restrictions and diminishing financial resources at a time when improving communication and increasing productivity are more important than ever.

What is teleconferencing?

A teleconference is simply an electronic meeting between three or more people, whether that meeting takes place over telephone lines or in a full-motion video teleconference. It is a straightforward, efficient tool which allows flexible options for communicating without wasted time and expense.

Why use teleconferencing?

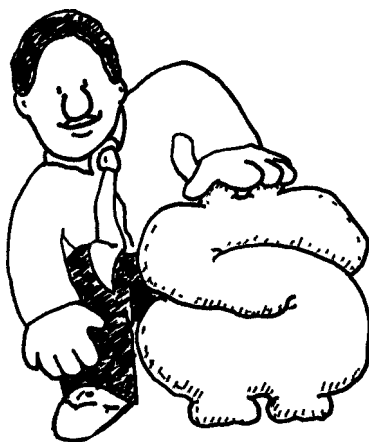
Nothing can replace the exchange of ideas, but factors such as distance and budget can hamper that exchange. Teleconferencing is a way to overcome these factors so the flow of ideas and information can take place. Teleconferencing also has some distinct advantages over more traditional meetings. One electronic meeting relays information more accurately than several face-to-face meetings since everyone involved receives the same information from the same source. It encourages immediate response and timely decisions, which result in increased productivity.

Video teleconferencing can also give every participant access to the non-verbal communication of the speakers and to visual materials such as charts and graphs.

The type of teleconference can be tailored to fit almost any need, from a one-time meeting to a regularly scheduled class. It can range from an automated phone meeting to an international video teleconference conducted via satellite, and can be supplemented by print materials or audio/visual materials distributed prior to the teleconference.

Any Virginia government agency can use this tool. Substantial benefits include immediacy, flexibility, decreased travel time and cost reductions.

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A great way to
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squeeze a buck,
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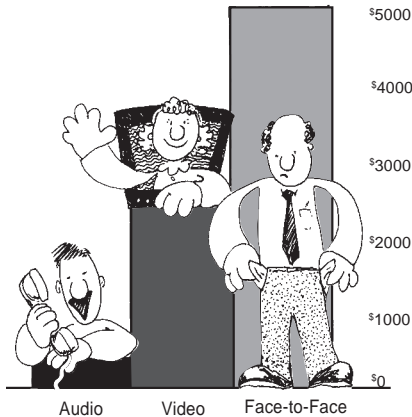
WHERE DOES VITA COME IN?

The Virginia Information Technologies Agency (VITA) assists government agencies in exploring potential applications of audio and video teleconferencing. VITA's services include full

motion video teleconferencing in the Executive Teleconference Center as well as full-service audio conferencing support and video receive site capability in our auditorium or Executive Teleconference Center.

Located in downtown Richmond, the center and conferencing service are available to all state agencies and institutions.

Comparison between projected costs for three-hour, 35-person audio, video and traditional face-to-face conferences.



Total costs: \$208 for audio, \$2,625 for video and \$4,817 for face-to-face.

(For cost breakdown call the teleconferencing coordinator at 804-371-5560.)

VITA's services include:

- Teleconferencing demonstrations;
- On-site presentations of current and potential teleconferencing applications;
- Technical assistance in conducting teleconferences and training for teleconference leaders and participants;
- Cost avoidance analyses of meetings conducted by teleconference;
- Scheduling and planning assistance for teleconference users;
- Video and audio teleconference origination facilities; and
- Short-term equipment loans.

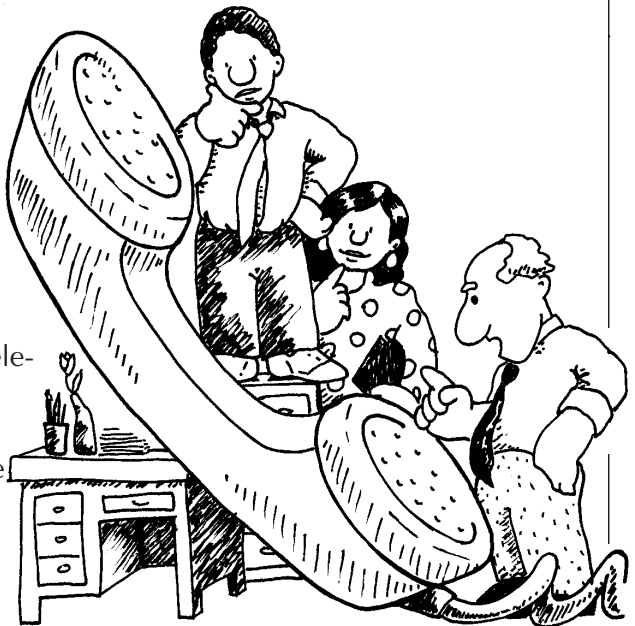
WHAT OPTIONS ARE AVAILABLE?

Since teleconferencing is a communications tool, the audience and the information determine the type of teleconference to be used. The question is, which type of teleconference will best increase productivity?

Audio-only, audio-plus and video teleconferencing are all accessible, cost-effective ways to disseminate information, conduct training, provide education and manage meetings.

Audio-only teleconferencing

As its name indicates, audio-only teleconferencing is a phone meeting. Unlike conference calls, which can be limited to three-way conversations on many state telephone systems, audio-only conferences can connect many phone lines together, and can include many people at each site with the addition of speaker phones. VITA uses teleconferencing bridges to connect or "bridge" telephone lines electronically for phone meetings. Computer conferencing using telephone modems may also be accommodated on the teleconference bridge.



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Tailor your
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teleconference
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for an exact fix
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Cost: The cost of audio-only teleconferencing is quite low – long-distance charges and a nominal bridge line usage charge.

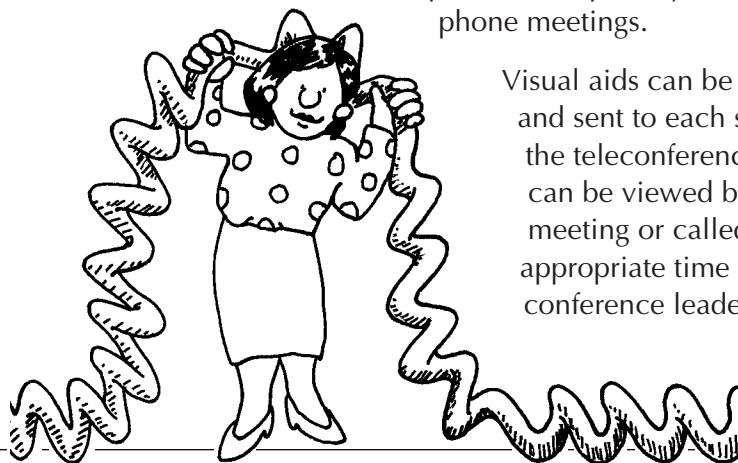
Equipment: The only equipment required for occasional audio-only teleconferencing is a telephone. Once a reservation is made with VITA, our operator can call participating sites and add them to an operator-assisted conference. Or, for an automatic conference, each participant can be given a confidential conference number to dial at a pre-determined time.

Regular users will want to purchase a high quality “speaker phone” that allows many people at one location to participate in a teleconference. Some audio conferencing systems are also available on short-term loan from VITA.

Audio-plus teleconferencing

One of the most popular types of teleconferencing is called “audio-plus.” This is audio-only conferencing plus handout materials, slides, overheads and/or video tapes. The addition of audio-visual aids enhances and expands the capability of audio-only phone meetings.

Visual aids can be prepared and sent to each site before the teleconference. They can be viewed before the meeting or called for at the appropriate time by the conference leader. With

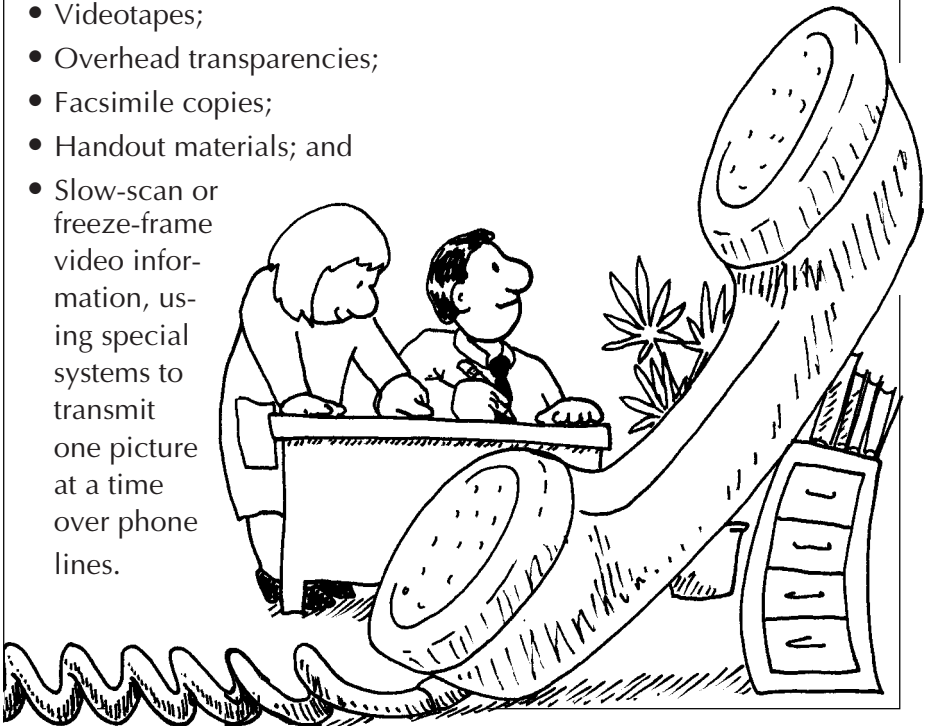


the assistance of site coordinators at each location, audio-visual materials can be presented on cue during the meeting.

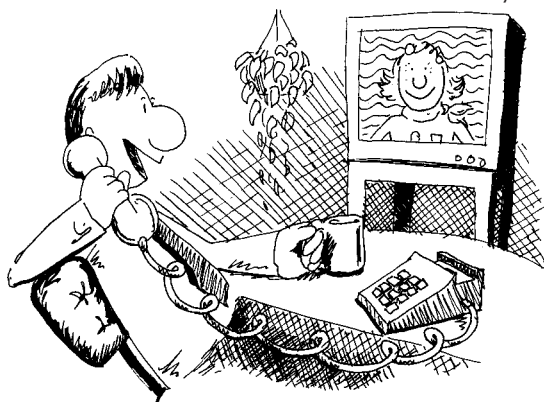
Cost: Other than long distance charges, bridge line usage charges or possible equipment rental charges, the only expense is for the production and mailing of visual aids for each site. Existing materials can often be used to enhance audio teleconferences, so even this expense is often negligible.

Equipment: Audio-plus teleconferencing uses audio conferencing equipment plus any equipment needed to present audio-visual information. Here are some of the possibilities.

- Computer data via telephone modems or on-line networks;
- Slides;
- Videotapes;
- Overhead transparencies;
- Facsimile copies;
- Handout materials; and
- Slow-scan or freeze-frame video information, using special systems to transmit one picture at a time over phone lines.



The most versatile type of teleconferencing is full-motion video, in which live video and audio can be transmitted to one or many sites.



There are two types of video teleconferencing: two-way video and one-way video/two-way audio.

Two-way video teleconferencing

Two-way video teleconferencing requires a two-way video and audio path so sites can see and hear each other. Transmission equipment is needed at each site included in the teleconference. This type of teleconferencing can currently take place between some electronic classrooms, Virginia's five public television (PTV) stations, the Executive Teleconference Center and personal videl for small groups using VITA's desktop video system..

One-way video/two-way audio teleconferencing

A second version, useful for large or dispersed audiences, is one-way video/two-way audio conferencing. In this type of teleconference, participants can see and hear the presenters and talk to them by phone, but the presenters can only hear, not see, the audience. This

allows the audience to interact with the presenters and to see the speakers and their materials.

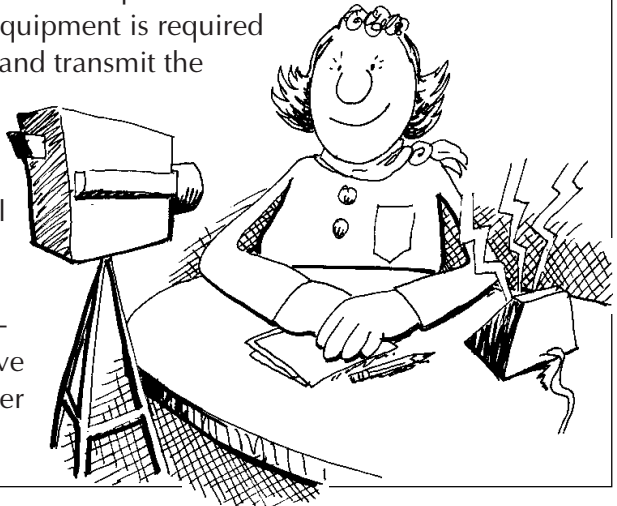
Video teleconferences can take place through four paths in the state:

1. The state's microwave network, which connects the PTV stations, provides closed-circuit conferencing capabilities at each station.
2. Satellite distribution is possible through one of the state's satellite uplinks in Charlottesville, Blacksburg, Roanoke, Richmond, Norfolk or Fairfax.
3. Local area microwave and cable-TV transmissions from most of the PTV stations can extend the reach of a video teleconference to schools, colleges and agencies equipped with special receivers.
4. Teleconferences of statewide importance can be broadcast by the PTV stations and received on regular televisions by 95 percent of the state's population.

.....
***A videoconference
is the next best
thing to being
there***
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Cost: Video teleconferencing is more expensive than audio-only or audio-plus because more sophisticated equipment is required to originate, receive and transmit the pictures and sound.

It still compares favorably in many cases with traditional meetings, however. A one-hour video teleconference, originating at the Executive Teleconference Center and using satellite



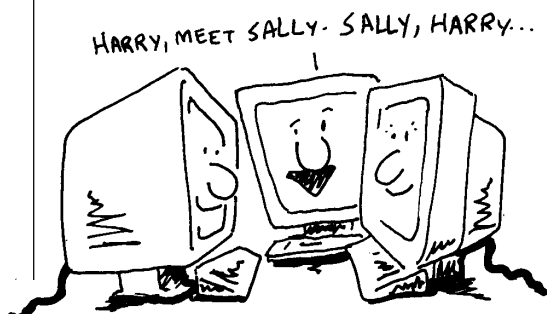
transmission, costs under \$700. Each additional hour costs approximately \$300. This could provide a class, meeting or seminar for a national audience.

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High-tech
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effects for even
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the small-time
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user
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Equipment: To originate a video teleconference, television cameras, lights, microphones and transmission equipment typically available at TV stations or dedicated teleconference centers are required. The state's PTV stations, VITA's teleconference center and some electronic classrooms have this capability and welcome state agencies, colleges and institutions. These services are scheduled through VITA's teleconferencing staff.

To receive a video teleconference, microwave or satellite receive systems plus TV monitors or projection systems are required.

Audio conferencing equipment will also be needed for interactive video teleconferencing. Again PTV stations, the Executive Teleconference Center, many Virginia colleges and state agencies have these capabilities and welcome state use of their facilities.



Digital, compressed, or desktop video

Compressed/digital video and desktop video conferencing are relatively new technologies which allow users to conduct business meetings and share data simultaneously using leased or "dial up" data lines to reach specific locations. The room equipment and

transmission equipment, CODEC, and data circuits are becoming more affordable, and a number of state entities have equipment in place, including VITA. Frequent users may choose to equip facilities for ongoing video conferencing with a fixed group of sites. Sites can be "bridged" together for multi-point video conferences through VITA's video bridging service. For more information about these services, call (804) 371-5560.

THE EXECUTIVE TELECONFERENCE CENTER

Video and audio teleconferences can be both originated and received at the Executive Teleconference Center. This facility is located in downtown Richmond.

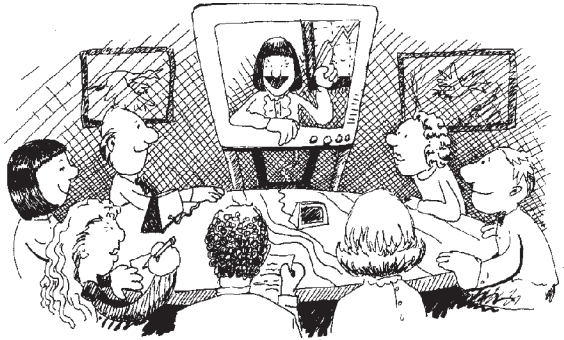
The center is designed for visually enhanced teleconferencing. Presenters can easily show printed materials and overhead transparencies using the overhead graphics camera. Slides and videotapes can also be incorporated into the meeting. Cameras, TV monitors and the video projector are operated remotely. ETC staff provide technical support during the teleconference, allowing the presenters to focus their attention on the flow and content of the conference.

In addition, VITA's large auditorium can be used as a receive site for extra seating. By scheduling both facilities, up to 186 participants can attend in the auditorium while another 20 people can comfortably participate in the teleconference center.

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Expert
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professionals
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make your
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ETC experience
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carefree
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The teleconference center has the capacity to reach large or small audiences at distant sites around the state, nation or world. The full motion video and audio signals from the teleconference center are transmitted via micro-wave to a satellite uplink at Richmond's WCVE, or routed to any of the state's public television stations or university uplinks.

Cost: Transmission costs vary. Contact VITA's teleconferencing staff at (804) 371-5560 for video teleconferencing costs or for further information.



PLANNING A TELECONFERENCE

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The best-laid
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plans hatch the
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best results
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First, call the VITA Teleconferencing Coordinator at (804) 371-5560. VITA is responsible for arranging all teleconferences for state agencies and institutions, and the teleconferencing staff will be happy to provide information, justifications, costs and assistance in all phases of planning teleconferences.

Keep in mind the lead time necessary for a teleconference:

A few days' notice is usually sufficient to schedule a phone meeting conference using the teleconferencing bridge.

Video teleconferences

Lead time for video conferences varies depending on the type of technology being used. Call (804) 371-5560 to discuss your video conference needs.

■ ■

**Don't go to your next meeting.
Teleconference.**

[illegible]

Look for more information about these and other VITA services on our Web page at

<http://www.vita.virginia.gov>

■ ■

Virginia Information
Technologies Agency
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Richmond, Virginia 23219
(804) 371-5560

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